CHINA'S AGRICULTURE

focus

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China's Agriculture

The basic features of rural life in pre-revolutionary China could be summarized in two words: poverty and hopelessness. In a typical village a few landlords owned almost all the arable land, and the great majority of the farmers rented tiny plots. Rents were exorbitant, up to 40 per cent of the value of a year's harvest, and they were due regardless of losses by natural calamity. The poverty of the farmer precluded good seeds, efficient tools, adequate fertilizing, and effective cultivation. Productivity was low and falling, starvation was more than likely in years of drought or flood, and indebtedness was an intolerable burden carried by the great mass of the people from generation to generation.

One of the first things the Communist government did, when it gained control of the Chinese mainland in 1949, was to abolish large landholdings and give land to the landless, and thus pave the way for the programs that are revolutionizing the rural way of life.

During the First Five-Year Plan (1953-57), in its desire to leap from a backward agricultural economy into an advanced industrial one, the government devoted 39 per cent of the total national investment to industries, and only 9.8 per cent to agriculture, forestry, and water conservation. Nevertheless, the value of agricultural production increased by 24.7 per cent, and it has continued to increase under the current Five-Year Plan (1958-62).

Agriculture is, actually, the heart of China's development program, not only because most of the country's 650 million inhabitants are farmers, but because it provides the surplus capital for industrialization and the exports to pay for the bulk of the heavy industry, power plants, transportation equipment, and fuels that must be imported to build up industry.

PRODUCTION AND PRODUCTIVITY. The increase in production of the three leading crops—rice, wheat, and cotton—has been spectacular. Rice production rose from an estimated 48.6 million metric tons in 1949 to 86.7 million in 1957, and probably 100 million in 1958. Wheat increased from 13.8 million tons to 24 million in 1957, and probably 30 million in 1958. Cotton increased from 444,000 tons to 1.6 million in 1957, and probably 2.1 million in 1958. The total grain production (excluding soybeans) between 1952 and 1957 jumped from 154.4 million tons to 185 million, and is said to have reached 250 million in 1958.

Productivity in yield per unit of land has been

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equally spectacular. Yields in pounds per acre in 1949 and estimates for 1958 are: rice, 1,688 and 3,000; wheat, 573 and 1,000; cotton, 143 and 350.

However, production targets were not reached for several other important crops, such as soybeans and sugar beats, and productivity per acre was not as high as expected for these and also for potatoes and jute. Furthermore, the quality of some, notably sugar cane, declined in places, probably where cultivation had been extended into marginal areas.

China's land area is 3.8 million square miles, or slightly larger than the United States, but a great part of it consists of mountains, cold plateaus, and deserts. About 260 million acres are now under cultivation, which means less than half an acre of arable land per person, one of the lowest rates in the world. Several million other acres can perhaps be cultivated, but they are likely to be too steep, or to have inferior soils, too short a growing season, or not enough rain.

On the other hand, because the farmland extends over so great a latitude, almost all types of crops from temperate to subtropical can be grown, and in the south, with a frost-free season of 275 or more days a year, and adequate rainfall, much of the cultivated land produces two or even three crops annually.

The problem of increasing crop production is being tackled in several ways. First, by the expansion of acreage, through conservation, reclamation, and promotion of more multiple cropping. Second, by increasing yields per acre, through irrigation, afforestation, water and soil conservation, use of better seed, application of more fertilizer, new farm implements, and the extension of more high-yielding crops such as maize and potatoes. Third, by reducing crop losses and waste, through the control of plant pests, better storage facilities, and a host of other methods. And fourth, by the establishment of cooperatives and communes which are designed to train the farmers, raise efficiency, and reform the marketing systems.

DROUGHT AND FLOOD CONTROL. Two of the chief causes of poverty and misery in pre-revolutionary China were droughts and floods. Living so close to the margin of survival, with little or nothing to fall back on in emergencies, and isolated by a sketchy transportation system, droughts often meant starvation. In the worst of them, several million people died. Floods had become more and more frequent and disastrous through the decades because deforestation on the uplands had swollen runoff. In 1931, floods left 12 million people homeless; in 1935 they affected 14 million.

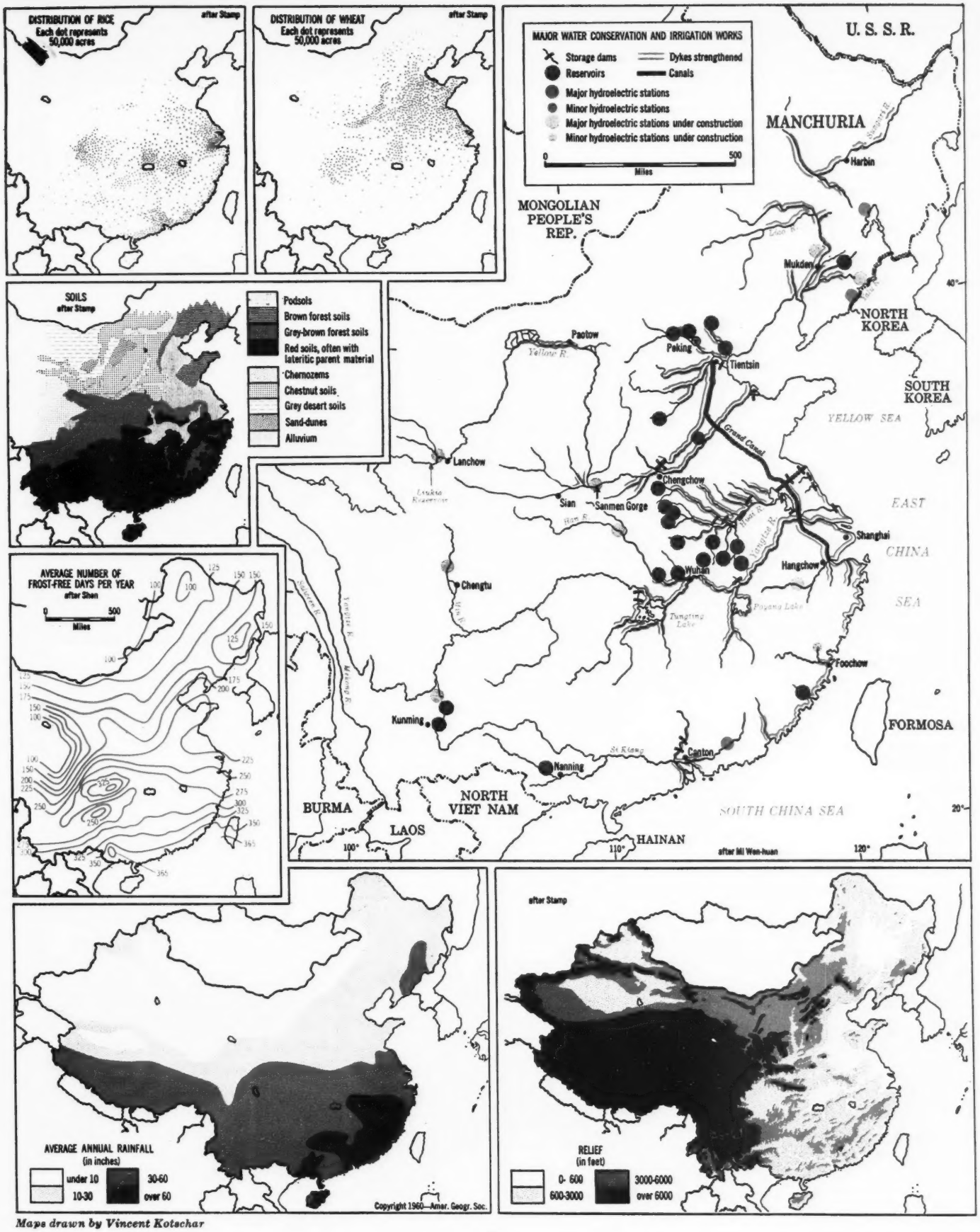
A prime objective of the government's farm program has been to eliminate these two types of catastrophe, and according to official statements, it has gone a long way toward doing so. In 1949 China had 53 million acres of irrigated land. By 1956 this had increased to 68 million. By the end of 1958, 156 million acres, or 60 per cent of the cropland, was under irrigation, and it is hoped that by 1961 virtually all the rest of it will be. Myriads of small-scale dams, sluice gates, canals, and reservoirs, and miles of dikes along the rivers and the coast, built by groups of farmers in their own communities, are literally transforming the landscape, not to mention the big multi-purpose projects such as those on the Yangtze, Huai, and Yellow Rivers. The Sanmen Gorge Project, for instance, scheduled for completion in 1960, will be able to regulate the entire flow of the Yellow River—the traditional "Sorrow of China"—downstream. In addition it will provide hydroelectric power and irrigation.

Comprehensive plans have been drawn up to construct canals to link the Yangtze and Yellow Rivers, so that surplus water in one can be shifted at will to another. The linking of these two river systems will be another big step toward the solution of northern China's water problems.

MAKING THE COUNTRY GREEN. Thousands of years of chopping down trees to make room for crops and to obtain fuel and timber left China with only one-tenth of its area forested. To increase the fuel and timber supply, help regulate the regime of rivers, prevent soil erosion, and provide shelter belts for farms and along desert margins, the government launched a tremendous afforestation program.

During the First Five-Year Plan apparently 28.2 million acres were planted in forest. In 1958, 69 million more acres were added, and some 30 million trees were planted in villages and along roads and rivers. The goal is to have 500 million acres covered with forest by 1968.

OTHER PROJECTS. For centuries the good soils of China have been intensively used and abused.



Maps drawn by Vincent Kotschar

Much of this land needs large applications of fertilizer to regain its fertility. The production of chemical fertilizers, which was less than 200,000 tons in 1952, was 760,000 tons in 1957, and is expected to reach 7 million tons in 1962.

Prewar damage from insects, pests, and diseases was enormous. Insects alone are estimated to have caused the loss of 12 million tons of cereals a year. There is still an acute shortage of insecticides, but, helped by rural leaders, an anti-pest drive against flies, mosquitoes, rats, and sparrows has been carried out with remarkable success.

The government is actively pushing basic agricultural research; is building, financing, and staffing a vast number of agricultural schools; and is sending farm delegations abroad for training. Eventually, each commune is to have a corps of agricultural experts and experimental plots in which the advantages of the latest farming techniques will be demonstrated.

Although we are dealing here mainly with crops, it should be mentioned that in order to diversify the rural economy and supply larger amounts of protein, the Second Five-Year Plan calls for considerable expansion of stock raising, especially cattle, sheep, goats, and pigs, and also chickens, ducks, and rabbits.

COLLECTIVIZATION OF AGRICULTURE. Development toward collective farming has proceeded in three stages in China. The first and simplest was the mutual aid team, composed of a few farm families, which pooled labor, field animals, and implements, but not the land. The second stage was the agricultural producers' cooperative, where the land was managed as a unit, but still remained the private property of the members. The third stage is the commune. The transition from cooperative to commune was rapid: in 1957, the 110 million farm families of China were almost all members of one of the 700,000-odd cooperatives. By November 1958 they had merged to form 25,000 Peoples Communes.

In the cooperatives, members kept and used their small farm implements. Medium-sized and larger ones generally were rented and used in common, and repairs and rents for them were paid in common, as were the costs of field animals—horses, donkeys, bullocks, and buffaloes.

How much income the members received was determined on the basis of four types of contribution: labor, implements, animals, and land. A cooperative usually first established a short-term production plan and some members were entrusted with making a preliminary study of potentialities. Later the cooperative made an inventory of land, members' skills, implements, and animals, and elected an Evaluation Council which consisted of both poorer and richer members, and women as well as men. The Council then assessed the contributions of each member according to established standards, and set the amount of remuneration for each.

The cooperatives served as the major media through which Peking's agricultural programs were initiated. Now they are being further implemented through the communes. As more ambitious projects of water conservation, afforestation, and so on were conceived, the advantages of larger communities with larger capital and manpower became obvious, according to government sources. Also according to these sources, the commune system was born at the grass-roots level rather than imposed by edict, and it has given the people far more direct control over their activities than they had previously. The typical commune consists of scores of villages and even some small towns, and its average population is something like 20,000 people. The individual no longer owns anything except his personal belongings, and everybody is paid a wage.

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There are evidences that better farming methods and higher returns have been achieved through the amalgamation of parcellized plots, the pooling of resources, the greater opportunity to use machines, obtain improved seeds, fertilizers, and credits, and a more effective use of manpower. In the old days during the slack season millions of farmers were employed only part-time or not at all. It is largely these underemployed that have carried out the enormous water conservation and afforestation projects.

The commune is probably the most extreme form of communism yet invented, for not only do people work in common, but they live in common. The commune provides housing, often in the form of dormitories, schools, clinics, and technical training institutes. Its public mess halls, laundries, grain mills, and nurseries which care for the young children, have abolished women's traditional household tasks, thereby loosening family ties and releasing millions of them for labor in field and factory.

Although more time is obviously needed before an evaluation of the effects of collectivization in China can be made, there seems to be no inherent reason why collective farming cannot succeed if it is carried out with the cooperation of the peasants. Its success certainly will depend greatly on the knowledge, efficiency, and honesty of the local leaders; on whether or not the work asigned to each individual is acceptable to him or her; and whether or not the remuneration is considered just and adequate. The former poverty and ill-health of the farmers, plus the fairly gradual approach to collectivization in the beginning, may help to explain the absence of any large-scale resistance to it.

POPULATION GROWTH. The net annual addition to China's population is now about 20 million, which means the equivalent of a new United States in less than a decade. Several factors seem to be responsible for this staggering increase in numbers. One is the large size of the population to start with. Another is its youthful composition. Another is peace and political stability, even though the latter

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